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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,653	12/12/2003	Jean Cotteret	LORE:010US	8957

7590

04/19/2006

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EXAMINER

ELHILO, EISA B

ART UNIT	PAPER NUMBER
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1751

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/734,653	Applicant(s) COTTERET ET AL.	
	Examiner Eisa B. Elhilo	Art Unit 1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 February 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6,8-10,14,17-19,21-26,28 and 32-110 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6,8,10,22-26,28,32-53, 55,61-84,86 and 92-110 is/are rejected.
- 7) ☒ Claim(s) 9,14,17-19,21,54,56-60,85 and 87-91 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 1751

DETAILED ACTION

1 This action is responsive to the amendment filed on February 7, 2006.

2 The cancellation of claims 2, 5, 7, 11-13, 15-16, 20, 27 and 29-31 is acknowledged.

Pending claims are 1, 3-4, 6, 8-10, 14, 17-19, 21-26, 28, 32-48 and newly added claims 49-110.

3 Bases on the applicant's amendment a new ground of rejection is made in this office action.

NEW GROUND OF REJECTION

Claim Objections

4 Claim 24 objected to because of the following informalities:

Claim 24 has been recited twice at pages 51-53 between claims 62 and 63 and at pages 76-78 between claims 93-94. The limitations of claim 24 should be deleted on these pages. Appropriate correction is required.

Claim Rejections - 35 USC § 102

5 The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3-4, 6, 8, 10, 22-26, 34, 36-39 and 41-47 are rejected under 35 U.S.C. 102(e) as being anticipated by Lim et al. (US 6,461,391 B1).

Lim et al. (US' 391 B1) teaches a hair dyeing composition comprising an oxidation base of cationic tertiary para-phenylenediamine having a formula (1), which is identical to the claimed

Art Unit: 1751

formula (I), when in the reference formula (1), R, R1 and R2 are alkyl radicals, R4 is hydrogen atom or an alkyl radical and R5 is a hydrogen atom as claimed in claims 1, 3-4, 6, 8 and 10 (see col. 2, formula (1) and lines 44-50) and when in the claimed formula (I), R2 represents the onion radical Z of the claimed formula (II), R3 is a hydrogen atom, n = 1 or 0 and R1 is an alkyl radical. Lim et al. also, teaches the compounds 1-(4-aminophenyl)-N,N-dimethyl-N-pentylpyrrolidin-3-ammonium iodide and 1-(4-aminophenyl)-N-(2-hydroxyethyl)-N,N-dimethylpyrrolidin-3-ammonium iodide which are identical to the claimed compounds as claimed in claims 22-26 (see col. 19, Example 22 (compound 7) and col. 26, Example 29 (compound 14) and a polyol of glycerin (trihydroxypropane) ($\text{CH}_2\text{OHCHOHCH}_2\text{OH}$) with a molecular weight of 92.09 wherein the glycerin have a formula identical to the claimed formula (V), when in the claimed formula (V), R'1, R'2, R'3 and R'4 are all hydrogen atoms, m = 1 and A represents al alkyl radical containing one carbon and one oxygen atom (CHOH) as claimed in claim 1 (see col. 8, line 16). The cationic tertiary para-phenylenediamine is represented in the amount of 0.01 to about 5.0%, which is within the claimed range as claimed in claim 34 (see col. 3, lines 43-46), wherein the composition also comprises cationic polymers as claimed in claim 36 (see col. 9, line 19), thickening polymers as claimed in claim 37 (see col. 8, lines 39-55), surfactants as claimed in claim 38 (see col.8, lines 23-25), additional primary intermediate (oxidation bases) of benzene-1,4-diamine (para-phenylenediamine) as claimed in claim 39 (see col. 3, line 57), coupler of resorcinol (1,3-dihydroxybenzene) as claimed in claims 41-42 (see col. 4, lines 56-57), wherein the couplers are presented in the amount of 0.005 to 20% which within the claimed range as claimed in claim 43 (see col. 4, lines 50-52), wherein the composition comprises direct dyes as claimed in claim 44 (see col. 7, lines 18-54), wherein the

Art Unit: 1751

composition further comprises hydroxylated solvent ethanol as claimed in claim 45 (see col. 8, line 15) and oxidizing agent of hydrogen peroxide as claimed in claim 46 (see 9, line 66). Lim et al. (US' 391 B1) also teaches a method for dyeing hair as claimed in claim 47 (see col. 9, lines 60-64). Lim et al. teaches all the limitations of the instant claims. Hence, Lim et al. anticipates the claims.

Claim Rejections - 35 USC § 103

6 The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 40 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1).

Lim et al. (US' 391 B1) teaches a hair dyeing composition comprising cationic direct dyes (see col. 7, lines 18-54) and an oxidation base of cationic tertiary para-phenylenediamine having a formula (1) (see col. 2, formula (1) and lines 44-50). Lim also teaches other primary intermediates (oxidation bases) such as para-phenylenediamines and couplers wherein the combination of primary intermediate and coupler compounds are presented in the composition in

Art Unit: 1751

the amount of 0.001 to 10% (see col. 7, lines 8-11). Lim also teaches that the oxidation dyeing composition is mixed with an oxidizing agent immediately prior to application to the hair (see col. 9, lines 60-63).

The reference is silent about teaching the percentage amounts of the additional oxidation bases used in the composition.

However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to optimize the amounts of the oxidation bases in the composition in order to get the maximum effective amounts of these ingredients in the composition because the reference teaches that the couplers and oxidation bases are presented in the amounts of 0.001 to about 10% which are generally used in equivalent amounts (see col. 7, lines 8-15). Further, as to the optimization of results, a patent will not be granted based upon the optimization of the result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the prima facie case of obviousness, see *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

With respect to claim 48, it would have been obvious to one having ordinary skill in the art at the time the invention was made to formulate such a composition by using a multi compartment device for holding and maintaining the composition because the reference clearly teaches that the oxidation composition is mixed with the oxidizing agent at the time of use which implies that both the oxidation composition and the oxidizing agent are provided in separate

Art Unit: 1751

containers, and, thus, a person of the ordinary skill in the art would be motivated to use a multi-compartment devices for holding the dyeing composition, absent unexpected results.

7 Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1) in view of Ochiai et al. (US 5,587,155).

The disclosure of Lim et al. (US' 391 B1) as described above, does not teach or disclose the species of polyols as claimed in claim 28.

However, Lim et al. (US' 391) suggests the use of polyols in the hair dyeing composition (see col. 8, line 16).

Ochiai et al. (US' 155) in analogous art of hair dyeing formulation (see col.7, lines 44-45), teaches a composition comprising polyols such as 1,3-butanediol (see col. 3, lines 30-34).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time the invention was made would be motivated to modify the composition of Lim et al. (US' 391) by incorporating the polyol 1,3-butanediol as taught by Ochiai et al. (US' 155) to arrive at the claimed invention with the reasonable expectation of success for improving the dyeing properties of the composition and preventing damage to the hair as well.

8 Claims 32-33, 35, 49-53, 55, 61-84, 86, 92-110 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lim et al. (US 6,461,391 B1) in view of Laurent et al. (US 2002/0046431 A1).

Lim et al. (US' 391 B1) teaches a hair dyeing composition comprising an oxidation base of cationic tertiary para-phenylenediamine having a formula (1), which is similar to the claimed formula (I), when in the reference formula (1), R, R1 and R2 are alkyl radicals, R4 is hydrogen atom or an alkyl radical and R5 is a hydrogen atom as claimed in claims 49-53, 55, 80-84 and 86

Art Unit: 1751

(see col. 2, formula (1) and lines 44-50) and when in the claimed formula (I), R₂ represents the onion radical Z of the claimed formula (II), R₃ is a hydrogen atom, n = 1 or 0 and R₁ is an alkyl radical. Lim et al. also, teaches the compounds 1-(4-aminophenyl)-N,N-dimethyl-N-pentylpyrrolidin-3-ammonium iodide and 1-(4-aminophenyl)-N-(2-hydroxyethyl)-N,N-dimethylpyrrolidin-3-ammonium iodide which are identical to the claimed compounds as claimed in claims 61-64 and 92-95 (see col. 19, Example 22 (compound 7) and col. 26, Example 29 (compound 14) and a polyol of glycerin (trihydroxypropane) (CH₂OHCHOHCH₂OH) with a molecular weight of 92.09, wherein the glycerin have a formula similar to the claimed formula (V), when in the claimed formula (V), R'₁, R'₂, R'₃ and R'₄ are all hydrogen atoms, m = 1 and A represents an alkyl radical containing one carbon and one oxygen atom (CHOH) as claimed in claims 49 and 80 (see col. 8, line 16). The cationic tertiary para-phenylenediamine is represented in the amount of 0.01 to about 5.0%, which is within the claimed range as claimed in claims 65 and 96 (see col. 3, lines 43-46), wherein the composition also comprises cationic polymers as claimed in claims 67 and 98 (see col. 9, line 19), thickening polymers as claimed in claims 68 and 99 (see col. 8, lines 39-55), surfactants as claimed in claims 69 and 100 (see col. 8, lines 23-25), additional primary intermediate (oxidation bases) of benzene-1,4-diamine (para-phenylenediamine) as claimed in claims 70 and 101 (see col. 3, line 57), wherein the additional 68 and 99 (see col. 8, lines 39-55), surfactants as claimed in claims 69 and 100 (see col. 8, lines 23-25), additional primary intermediate (oxidation bases) of benzene-1,4-diamine (para-phenylenediamine) as claimed in claims 70 and 101 (see col. 3, line 57), wherein the additional primary intermediate represents in the claimed amounts as claimed in claims 71 and 102 (see col. 7, lines 10-15), coupler of resorcinol (1,3-dihydroxybenzene) as claimed in claims 72-73 and

Art Unit: 1751

103-104 (see col. 4, lines 56-57), wherein the couplers are presented in the amount of 0.005 to 20% which within the claimed range as claimed in claims 74 and 105 (see col. 4, lines 50-52), wherein the composition comprises direct dyes as claimed in claims 75 and 106 (see col. 7, lines 18-54), wherein the composition further comprises hydroxylated solvent ethanol as claimed in claims 76 and 107 (see col. 8, line 15) and oxidizing agent of hydrogen peroxide as claimed in claims 77 and 108 (see 9, line 66). Lim et al. (US' 391 B1) also teaches a method for dyeing hair as claimed in claims 78 and 109 (see col. 9, lines 60-64).

The instant claims differ from the reference by reciting specific species of polyols in the dyeing composition.

However, Lim et al. (US' 391 B1) suggests the use of polyols in the dyeing composition (see col. 8, line 16).

Laurent et al. (US' 431 A1) in analogous art of hair dyeing formulation, teaches a composition comprising polyols such as 3-methyl-1,5-pentanediol as claimed in claims 32, 33, 49 and 80 (see page 10, paragraph, 0254) and wherein the polyols are presented in the amount of 0.1 to 20% which within the claimed range as claimed in claims 35, 66 and 97 (see page 10, paragraph, 0261).

Therefore, in view of the teaching of the secondary reference, one having ordinary skill in the art at the time of the invention, would be motivated to modify the composition of Lim et al. (US' 391) by incorporating the polyols as taught by Laurent et al. (US' 431 A1) to make such a composition. Such a modification would be obvious because the primary reference of Lim et al. (US' 391) suggests the use of polyols in the dyeing composition as the solvents. Laurent et al. (US' 431 A1) as a secondary reference clearly teaches the claimed species of these polyols as

Art Unit: 1751

solvent in the dyeing composition and, thus, a person of the ordinary skill in the art would be motivated to incorporate these solvents (polyols) as taught by Laurent et al. in the dyeing composition of Lim et al. with reasonable expectation of success for improving the solubility of the dyeing composition and would expect such a composition to have similar properties to those claimed absent unexpected results.

With respect to claims 79 and 110, it would have been obvious to one having ordinary skill in the art at the time the invention was made to formulate such a composition by using a multi compartment device for holding and maintaining the composition because the reference clearly teaches that the oxidation composition is mixed with the oxidizing agent at the time of use which implies that both the oxidation composition and the oxidizing agent are provided in separate containers, and, thus, a person of the ordinary skill in the art would be motivated to use a multi-compartment devices for holding the dyeing composition, absent unexpected results.

Allowable Subject Matter

9 Claims 9, 14, 17-19, 21, 54, 56-60, 85 and 87-91 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record do not teach or disclose cationic para-phenylenedimanie compounds of the claimed formula (II), in which x is equal 1. The prior art of record also do not teach or disclose para-phenylenedimanie compounds of the claimed formulae (III) and (IV).

Response to Applicant's Arguments

10 Applicant's arguments filed on 2/7/2006 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 1751

11 Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eisa B. Elhilo whose telephone number is (571) 272-1315. The examiner can normally be reached on M - F (8:00 -5:30) with alternate Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1751

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'Eisa Elhilo', with a stylized flourish at the end.

Eisa Elhilo
Primary Examiner
Art Unit 1751

April 14, 2006